

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island	Oahu	Site Elevation	10 ft
Site	Ewa Beach Park	Site #	1
Coast	South Shore		
Whale Spotting Probability		LOW	0.08
Surface Activity Index		N/A	

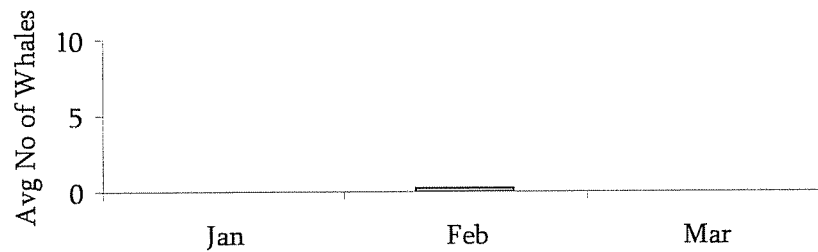


Figure 8 and Table 3. Average number of whales (+Standard Deviation in graph) counted at Ewa Beach Park during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	1	0
2003	0	0	0
2004	0	0	0
2005	0	0	0

NO BEHAVIORAL DATA

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 10-40 ft
 Site Ko Olina Site # 2
 Coast Waianae
 Whale Spotting Probability LOW 0.75
 Surface Activity Index LOW 0.33

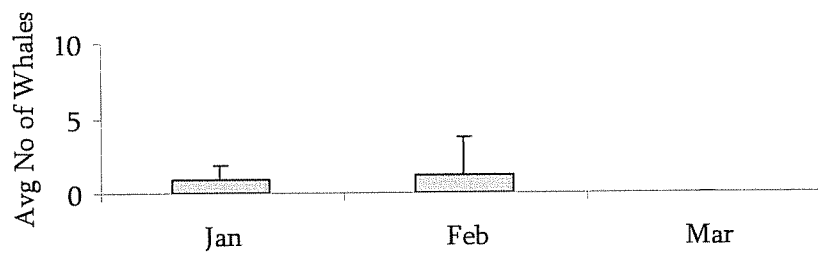


Figure 9 and Table 4. Average number of whales (+Standard Deviation in graph) counted at Ko Olina during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	2	5	0
2003	0	0	0
2004	1	0	0
2005	1	0	0

Table 5. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Ko Olina over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.10	0.48	0.41	0.42	0.41	0.42
2003	-	-	-	-	-	-
2004	0.00	0.31	-	-	-	-
2005	0.00	0.08	-	-	-	-
Avg	0.01	0.29	0.41	0.42	0.41	0.42

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 100 ft
 Site Maili Point Site # 3
 Coast Waianae
 Whale Spotting Probability MED/HI 2.00
 Surface Activity Index LOW 0.26

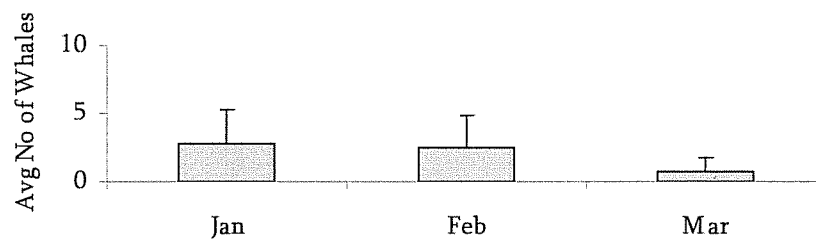


Figure 10 and Table 6. Average number of whales (+Standard Deviation in graph) counted at Maili Point during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	2	5	0
2003	0	1	0
2004	6	0	1
2005	3	4	2

Table 7. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Maili Point over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.14	1.46	-	-
2003	-	-	-	-	-	-
2004	0.07	0.28	-	-	0.11	0.11
2005	0.55	0.07	0.06	0.08	-	-
Avg	0.31	0.175	0.10	0.77	0.11	0.11

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island	Oahu	Site Elevation	20 ft
Site	Makua Cave	Site #	4
Coast	Waianae		
Whale Spotting Probability	MED/L	1.82	
Surface Activity Index	LOW	0.35	

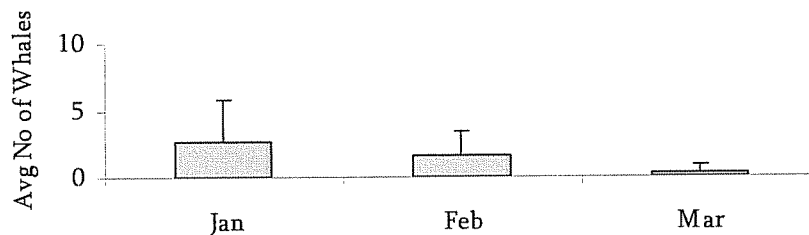


Figure 11 and Table 8. Average number of whales (+Standard Deviation in graph) counted at Makua Cave during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	3	0
2003	1	2	0
2004	7	0	1
2005	2	4	-

Table 9. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Makua Cave over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	1.03	1.06	-	-
2003	0.00	0.29	0.19	0.38	-	-
2004	0.04	0.22	-	-	0.14	0.00
2005	0.50	2.20	0.07	0.00	-	-
Avg	0.18	0.90	0.43	0.48	0.14	0.00

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 40 ft
 Site Kaena Point (West Shore) Site # 5
 Coast North Shore
 Whale Spotting Probability MED/L 1.78
 Surface Activity Index LOW 0.32

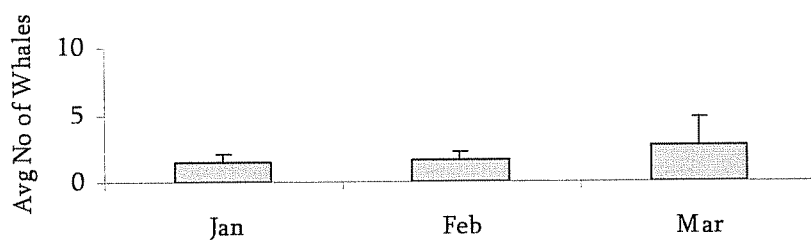


Figure 12 and Table 10. Average number of whales (+Standard Deviation in graph) counted at Kaena Point (West Shore) during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	-	-
2003	3	2	0
2004	4	-	2
2005	1	4	0

Table 11. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Kaena Point (West Shore) over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.70	0.80	-	-
2003	0.00	0.15	0.00	0.31	-	-
2004	0.00	0.00	-	-	0.13	0.00
2005	0.61	1.22	0.05	0.19	0.00	1.00
Avg	0.20	0.46	0.25	0.43	0.07	0.50

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island	Oahu	Site Elevation	20 ft
Site	Kaena Point (North Shore)	Site #	6
Coast	North Shore		
Whale Spotting Probability		MED/HI	1.90
Surface Activity Index		MED/HI	0.47

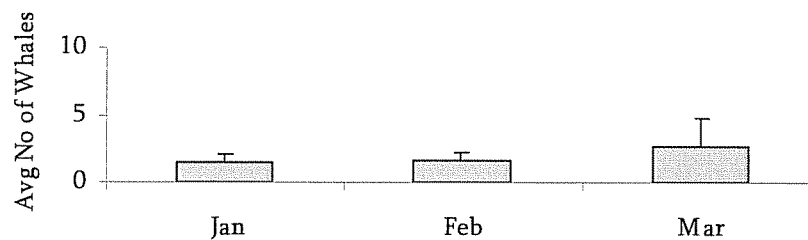


Figure 13 and Table 12 Average number of whales (+Standard Deviation in graph) counted at Kaena Point (North Shore) during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	2	1	1
2003	2	2	5
2004	1	-	-
2005	1	2	2

Table 13. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Kaena Point (North Shore) over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.23	0.79	0.47	0.46	-	-
2003	0.09	0.00	0.67	0.00	0.46	0.54
2004	0.94	0.00	-	-	-	-
2005	0.19	0.52	1.53	0.33	-	-
Avg	0.36	0.33	0.89	0.26	0.46	0.54

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 20 ft
 Site Mokuleia Beach Park Site # 7
 Coast North Shore
 Whale Spotting Probability MED/L 1.08
 Surface Activity Index MED/HI 0.62

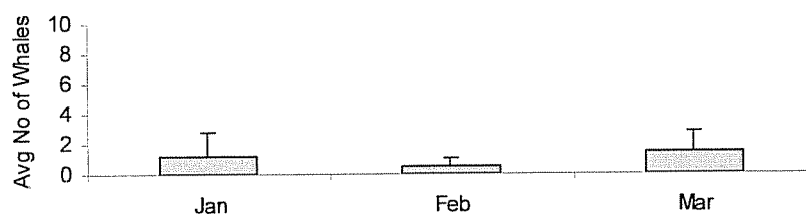


Figure 14 and Table 14 Average number of whales (+Standard Deviation in graph) counted at Mokuleia Beach Park during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	-	-
2003	3	2	0
2004	4	-	2
2005	1	4	0

Table 15. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Mokuleia Beach Park over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.70	0.80	-	-
2003	0.00	0.15	0.00	0.31	-	-
2004	0.00	0.00	-	-	0.13	0.00
2005	0.61	1.22	0.05	0.19	0.00	1.00
Avg	0.20	0.46	0.25	0.43	0.07	0.50

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 20 ft
 Site Puaena Point Site # 8
 Coast North Shore
 Whale Spotting Probability LOW 0.64
 Surface Activity Index MED/HI 0.74

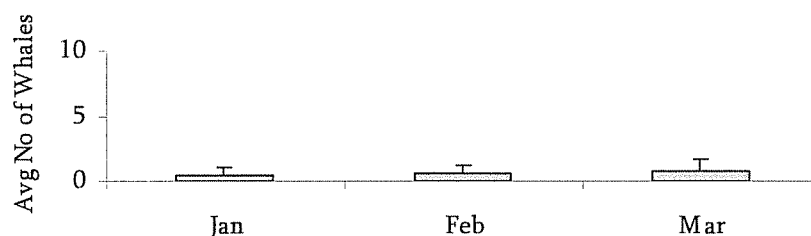


Figure 15 and Table 16. Average number of whales (+Standard Deviation in graph) counted at Puaena Point during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	1	0
2003	0	0	0
2004	1	-	1
2005	1	1	2

Table 17. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Puaena Point over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.19	0.71	0.63	0.60	2.14	0.71
2003	-	-	-	-	-	-
2004	0.82	3.88	-	-	-	-
2005	0.17	0.00	0.50	0.00	0.26	0.19
Avg	0.39	1.53	0.57	0.30	1.20	0.45

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 30 ft
 Site Shark's Cove Site # 9
 Coast North Shore
 Whale Spotting Probability MED/HI 2.58
 Surface Activity Index MED/HI 0.52

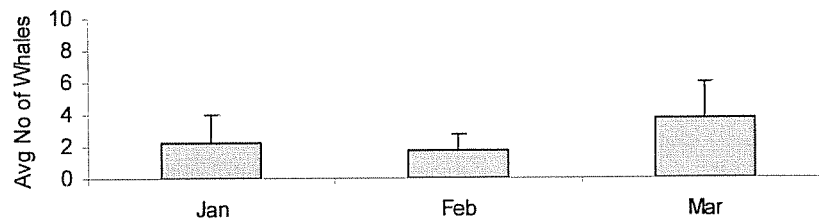


Figure 16 and Table 18. Average number of whales (+Standard Deviation in graph) counted at Shark's Cove during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	3	3	3
2003	0	2	5
2004	2	1	6
2005	4	1	1

Table 19. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Shark's Cove over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.31	0.78	0.00	0.12	0.13	0.29
2003	-	-	0.69	0.10	0.74	0.46
2004	1.09	1.56	0.00	0.75	0.11	0.49
2005	0.32	0.91	0.64	0.00	1.35	0.06
Avg	0.57	1.08	0.33	0.24	0.58	0.33

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 20 ft
 Site Turtle Bay Site # 10
 Coast North Shore
 Whale Spotting Probability MED/L 1.33
 Surface Activity Index MED/HI 1.13

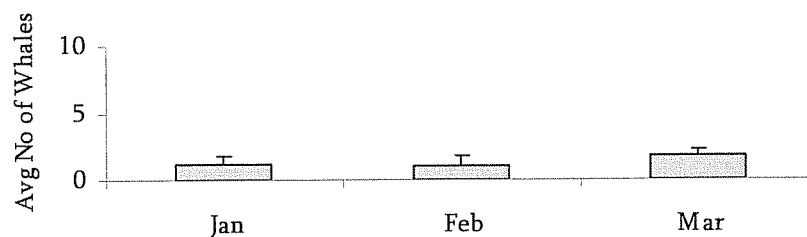


Figure 17 and Table 20 Average number of whales (+Standard Deviation in graph) counted at Turtle Bay during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	2	1
2003	1	1	2
2004	1	0	2
2005	2	1	2

Table 21. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Turtle Bay over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	1.57	0.68	0.50	0.28	0.57	0.29
2003	-	-	0.00	1.14	-	-
2004	0.00	1.30	0.17	0.17	0.50	0.29
2005	0.00	2.62	4.00	8.00	0.43	1.43
Avg	0.52	1.53	1.17	2.4	0.5	0.67

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 40 ft
 Site Laie Point Site # 11
 Coast North Shore
 Whale Spotting Probability HIGH 3.42
 Surface Activity Index LOW 0.32

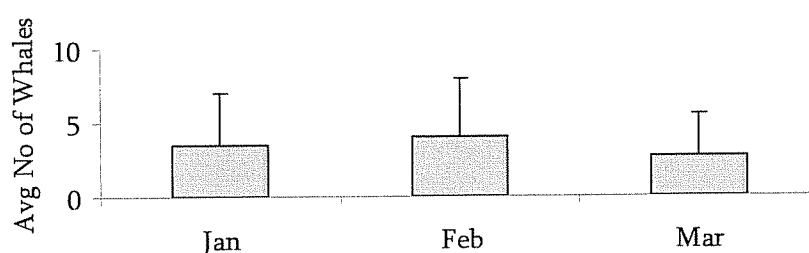


Figure 18 and Table 22. Average number of whales (+Standard Deviation in graph) counted at Laie Point during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	2	4	2
2003	5	6	2
2004	4	4	4
2005	3	2	3

Table 23. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Laie Point over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.00	0.05	0.10	0.73	0.45	0.43
2003	0.13	1.17	0.07	0.28	-	-
2004	0.29	0.24	0.08	0.00	0.38	1.61
2005	0.11	0.00	0.00	0.20	0.21	0.00
Avg	0.13	0.37	0.06	0.30	0.35	0.68

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 0 ft
 Site Hauula Beach Park Site # 12
 Coast North Shore
 Whale Spotting Probability LOW 0.67
 Surface Activity Index MED/HI 0.74

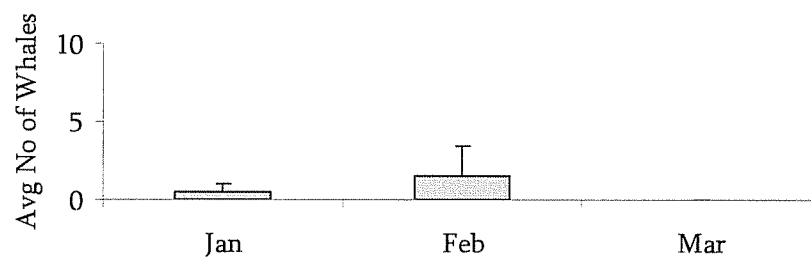


Figure 19 and Table 24 Average number of whales (+Standard Deviation in graph) counted at Hauula Beach Park during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	2	0
2003	1	0	0
2004	0	4	0
2005	1	0	-

Table 25. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Hauula Beach Park over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	-	-	-	-
2003	0.33	0.67	-	-	-	-
2004	-	-	-	-	0.00	3.50
2005	0.25	0.56	-	-	-	-
Avg	0.29	0.62	0.00	0.00	0.00	3.50

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 150 ft
 Site Kualoa Ranch (Bunkers) Site # 13
 Coast North Shore
 Whale Spotting Probability MED/L 1.42
 Surface Activity Index MED/HI 0.59

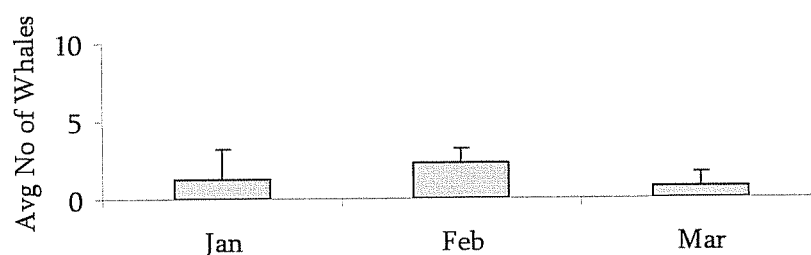


Figure 20 and Table 26. Average number of whales (+Standard Deviation in graph) counted at Kualoa Ranch (Bunkers) during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	3	0
2003	0	2	1
2004	1	3	2
2005	4	1	0

Table 27. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Kualoa Ranch (Bunkers) over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.38	0.15	0.93	1.11	0.00	0.18
2003	0.00	0.67	-	-	-	-
2004	0.32	0.00	0.82	0.18	0.08	5.67
2005	0.24	0.29	0.06	0.00	0.00	0.00
Avg	0.24	0.28	0.60	0.43	0.03	1.95

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 20-100 ft
 Site Pyramid Rock Site # 14
 Coast Windward Coast
 Whale Spotting Probability MED/HI 2.22
 Surface Activity Index LOW 0.23

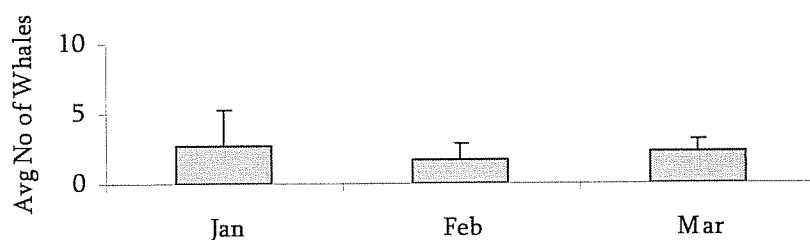


Figure 21 and Table 28. Average number of whales (+Standard Deviation in graph) counted at Pyramid Rock during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	3	1	3
2003	0	1	2
2004	6	3	1
2005	2	-	3

Table 29. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Pyramid Rock over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.20	0.13	0.26	0.13	0.02	0.26
2003	-	-	0.00	0.59	0.00	0.08
2004	0.17	0.13	0.34	0.47	-	-
2005	0.25	0.42	-	-	0.51	0.10
Avg	0.21	0.23	0.20	0.40	0.18	0.15

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 120 ft
 Site Mokapu Point Site # 15
 Coast Windward Coast
 Whale Spotting Probability MED/L 0.47
 Surface Activity Index MED/HI 2.08

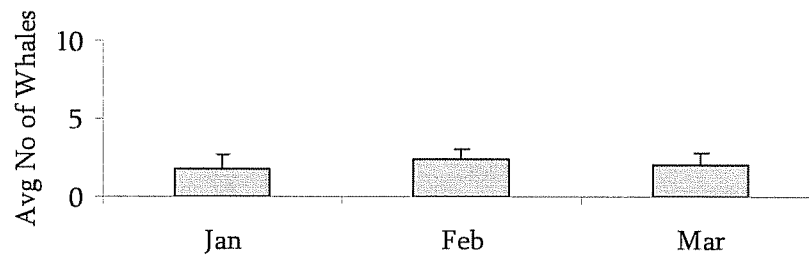


Figure 22 and Table 30. Average number of whales (+Standard Deviation in graph) counted at Mokapu Point during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	3	1
2003	2	3	2
2004	1	2	2
2005	3	2	3

Table 31. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Mokapu Point over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.45	0.33	2.22	2.59
2003	0.00	0.00	0.19	1.02	0.15	0.15
2004	-	-	-	-	0.05	1.40
2005	0.00	0.10	0.08	0.58	0.00	0.97
Avg	0.00	0.05	0.24	0.64	0.61	1.28

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 30 ft
 Site Lanikai Site # 16
 Coast Windward Coast
 Whale Spotting Probability LOW 0.61
 Surface Activity Index LOW 0.17

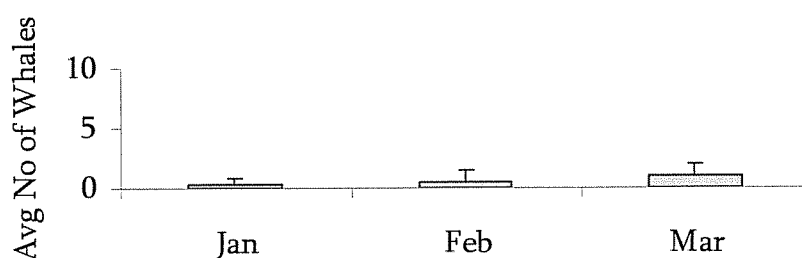


Figure 23 and Table 32. Average number of whales (+Standard Deviation in graph) counted at Lanikai during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	-	0	-
2003	0	2	1
2004	0	0	0
2005	1	0	2

Table 33. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Lanikai over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	-	-	-	-
2003	-	-	0.33	0.78	0.11	0.22
2004	0.00	0.00	0.20	0.00	0.00	0.00
2005	0.00	0.16	0.83	0.00	0.43	0.00
Avg	0.00	0.08	0.45	0.26	0.18	0.07

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 0 ft
 Site Waimanalo Beach Park Site # 17
 Coast Windward Coast
 Whale Spotting Probability LOW - almost none
 Surface Activity Index MED/HI 0.14

NO WHALES EVER SIGHTED DURING THE COUNT,
 HOWEVER WHALES WERE SIGHTED DURING
 BEHAVIORAL SAMPLING WHICH OCCURRED BOTH
 DURING CENSUS PERIODS AND BEFORE AND
 AFTER THEM.

Table 34. Average number of whales (+Standard Deviation in graph) counted at Waimanalo Beach Park during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0

Table 35. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Waimanalo Beach Park over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	-	-	0.29	0.09
2003	-	-	-	-	-	-
2004	-	-	-	-	0.25	0.5
2005	-	-	0.00	0.00	-	-
Avg	-	-	0.00	0.00	0.27	0.30

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 400 ft
 Site Makapuu Point Lighthouse Site # 18
 Coast Windward Coast
 Whale Spotting Probability HIGH 4.67
 Surface Activity Index MED/HI 0.55

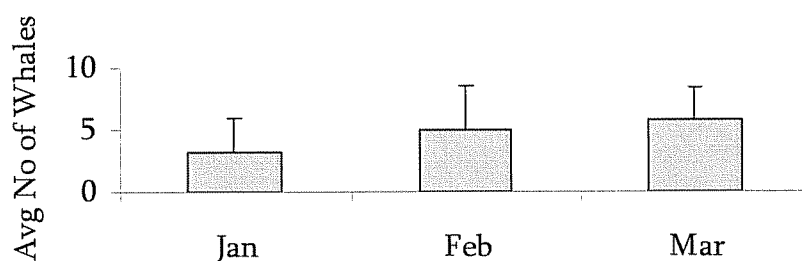


Figure 24 and Table 36. Average number of whales (+Standard Deviation in graph) counted at Makapuu Point Lighthouse during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	0	8	8
2003	6	3	6
2004	2	8	7
2005	5	1	2

Table 37. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Makapuu Point Lighthouse over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.12	0.23	0.21	0.50
2003	0.13	0.48	1.72	0.44	0.48	0.93
2004	0.45	0.86	0.59	1.43	0.14	0.13
2005	0.00	0.00	0.78	0.32	2.41	0.25
Avg	0.19	0.45	0.80	0.60	0.81	0.45

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island	Oahu	Site Elevation	70 ft
Site	Halona Blowhole	Site #	19
Coast	Windward Coast		
Whale Spotting Probability	HIGH	3.33	
Surface Activity Index	MED/L	0.44	

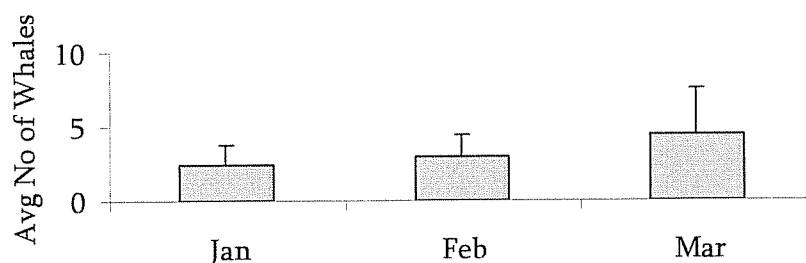


Figure 25 and Table 38 . Average number of whales (+Standard Deviation in graph) counted at Halona Blowhole during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	4	8
2003	4	3	3
2004	2	4	6
2005	3	1	1

Table 39. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Halona Blowhole over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.10	0.40	0.34	0.13	0.17	0.11
2003	0.23	0.77	-	-	0.23	1.75
2004	0.42	1.73	0.06	0.32	0.09	0.59
2005	0.12	0.07	0.38	0.70	1.20	0.07
Avg	0.22	0.74	0.26	0.38	0.42	0.63

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island	Oahu	Site Elevation	80 ft
Site	Lanai Lookout	Site #	20
Coast	Windward Coast		
Whale Spotting Probability	HIGH	3.41	
Surface Activity Index	MED/HI	0.58	

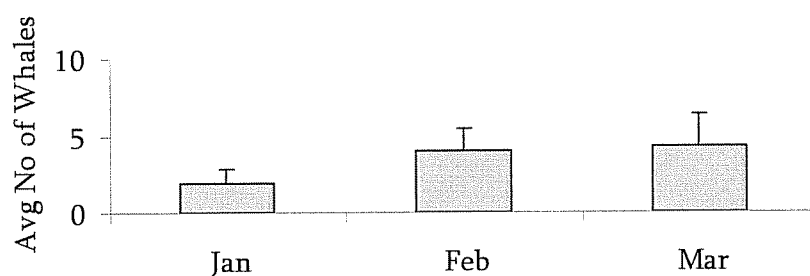


Figure 26 and Table 40. Average number of whales (+Standard Deviation in graph) counted at Lanikai Lookout during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	4	6
2003	3	5	3
2004	2	5	6
2005	2	2	2

Table 41. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Lanikai Lookout over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.53	0.67	0.38	0.31	0.17	0.17
2003	0.77	0.27	0.42	0.05	1.52	1.26
2004	0.20	0.00	0.31	0.74	0.43	1.04
2005	0.00	0.00	0.31	0.96	2.56	0.13
Avg	0.50	0.31	0.36	0.51	1.17	0.65

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 80-120 ft
 Site Hanauma Bay Site # 21
 Coast Windward Coast
 Whale Spotting Probability HIGH 3.69
 Surface Activity Index LOW 0.30

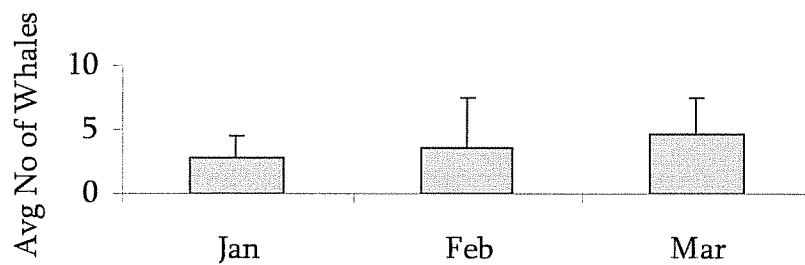


Figure 27 Table 42. Average number of whales (+Standard Deviation in graph) counted at Hanauma Bay during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	2	3
2003	5	8	3
2004	3	-	8
2005	2	1	-

Table 43. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Hanauma Bay over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	0.20	0.67	-	-	0.18	0.09
2003	0.15	0.08	0.05	0.13	0.51	0.85
2004	0.45	0.00	-	-	0.09	0.82
2005	0.78	0.28	0.38	0.05	-	-
Avg	0.40	0.26	0.22	0.09	0.26	0.59

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 50 ft
 Site Spitting Caves Site # 22
 Coast Windward Coast
 Whale Spotting Probability HIGH 4.00
 Surface Activity Index LOW 0.26

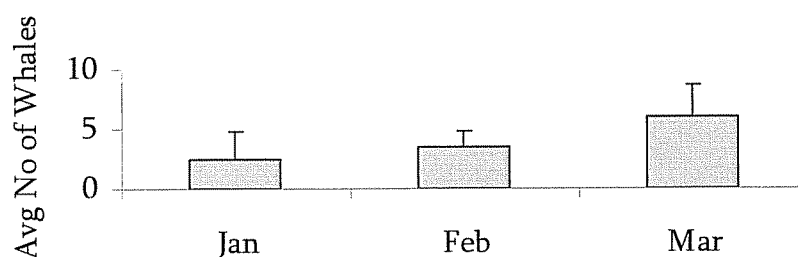


Figure 28 and Table 44. Average number of whales (+Standard Deviation in graph) counted at Spitting Caves during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	5	8
2003	2	3	3
2004	1	4	7
2005	6	2	-

Table 45. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Spitting Caves over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.26	0.16	0.00	0.26
2003	0.07	0.07	0.06	0.14	0.16	1.26
2004	0.25	0.00	0.31	0.77	0.15	0.75
2005	0.27	0.13	0.02	0.00	-	-
Avg	0.20	0.07	0.16	0.27	0.10	0.76

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 120 ft
 Site Diamond Head Lookout Site # 23
 Coast South Shore
 Whale Spotting Probability MED/HI 1.91
 Surface Activity Index MED/L 0.38

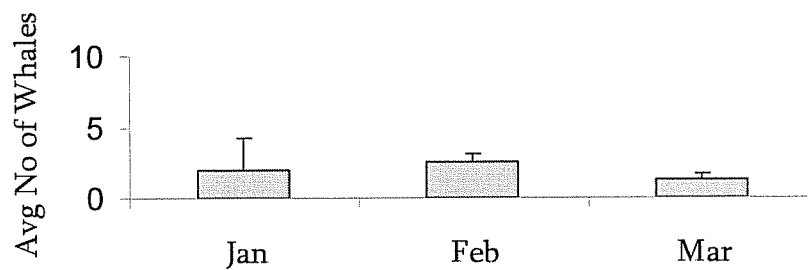


Figure 29 Table 46. Average number of whales (+Standard Deviation in graph) counted at Diamond Head Lookout during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	3	1
2003	2	2	2
2004	0	2	1
2005	5	3	1

Table 47. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Diamond Head Lookout over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	0.49	0.48	0.13	0.00
2003	0.00	0.00	-	-	-	-
2004	-	-	0.00	0.33	0.00	0.65
2005	0.05	0.17	0.77	1.03	2.33	0.33
Avg	0.03	0.08	0.42	0.61	0.82	0.33

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 0-10 ft
 Site Magic Island Site # 24
 Coast South Shore
 Whale Spotting Probability LOW 0.58
 Surface Activity Index MED/L 0.37

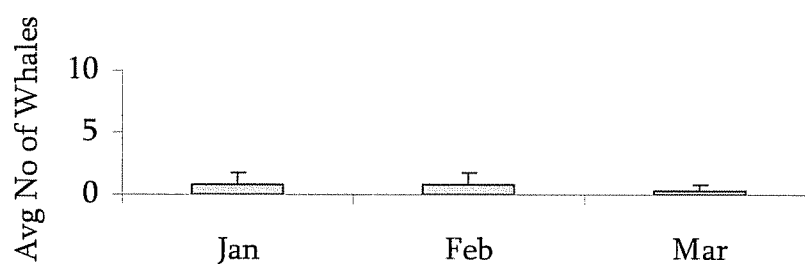


Figure 30 and Table 48. Average number of whales (+Standard Deviation in graph) counted at Magic Island during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	2	0	0
2003	1	1	0
2004	0	0	0
2005	0	2	1

Table 49. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Magic Island over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	-	-	-	-
2003	-	-	1.19	2.12	-	-
2004	-	-	-	-	-	-
2005	0.00	0.50	0.17	0.00	0.00	0.00
Avg	0.00	0.50	0.68	1.06	0.00	0.00

Distribution Patterns and Behaviors of Humpback Whales around Oahu, Kauai, Hawaii and Kahoolawe: 2002-2005

Island Oahu Site Elevation 20-60 ft
 Site Kakaako Beach Park Site # 25
 Coast South Shore
 Whale Spotting Probability LOW 0.97
 Surface Activity Index MED/HI 0.48

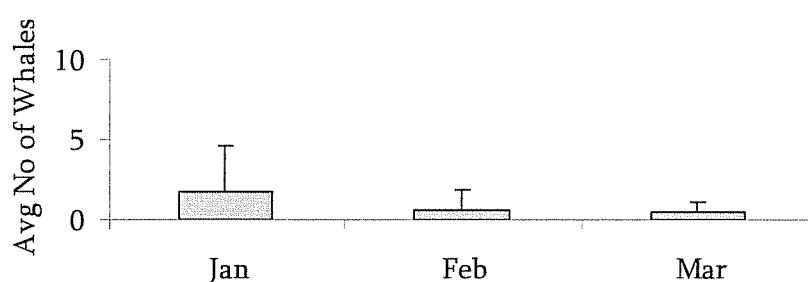


Figure 31 Table 50. Average number of whales (+Standard Deviation in graph) counted at Kakaako Beach Park during nine 15-minute periods between 08:00 am and 12:15 pm between January and March 2002-2005.

Year	Month		
	Jan	Feb	Mar
2002	1	0	0
2003	0	2	0
2004	0	-	1
2005	6	0	1

Table 51. Average number of breaches and body slaps (used as an index of whale surface activity) per whale at Kakaako Beach Park over the sampling period.

	Jan		Feb		Mar	
	Breach	Slap	Breach	Slap	Breach	Slap
2002	-	-	-	-	-	-
2003	-	-	0.32	1.84	-	-
2004	-	-	-	-	0.55	0.55
2005	0.00	0.00	-	-	0.33	0.00
Avg	0.00	0.00	0.32	1.84	0.44	0.28